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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,314	02/26/2002	Fumio Isshiki	ASAM.0053	2802
38327	7590	09/14/2007	EXAMINER	
REED SMITH LLP			GIESY, ADAM	
3110 FAIRVIEW PARK DRIVE, SUITE 1400			ART UNIT	
FALLS CHURCH, VA 22042			PAPER NUMBER	
			2627	
			MAIL DATE	
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			09/14/2007	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/082,314	ISSHIKI, FUMIO	
	Examiner	Art Unit	
	Adam R. Giesy	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 7-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,8,11 and 14-18 is/are rejected.
- 7) ☒ Claim(s) 9,10,12,13 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-5, 7, 8, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (hereinafter Yoshida – US Doc. No. 2002/0024153 A1) in view of Sato (US Pat. No. 6,452,215 B1) and further in view of Kononenko (Asymmetric Multiple-Quantum-Well Heterostructures).

Claims 1, 3-5, 7, 8, 14, and 18 are rejected for the same reasons as discussed in the prior Office Action, mailed on 12/28/2006 (see Response to Arguments).

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (hereinafter Yoshida – US Doc. No. 2002/0024153 A1) in view of Sato (US Pat. No. 6,452,215 B1) and further in view of Kononenko (Asymmetric Multiple-Quantum-Well Heterostructures) and even further in view of Chapple-Sokol et al. (hereinafter Chapple – US Pat. No. 5,354,707).

Claim 11 is rejected for the same reasons as discussed in the prior Office Action, mailed on 12/28/2006 (see Response to Arguments).

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (hereinafter Yoshida – US Doc. No. 2002/0024153 A1) in view of Sato (US Pat.

No. 6,452,215 B1) and further in view of Kononenko (Asymmetric Multiple-Quantum-Well Heterostructures) and even further in view of Hayashi (US Pat. No. 6,394,655 B1).

Claim 15 is rejected for the same reasons as discussed in the prior Office Action, mailed on 12/28/2006 (see Response to Arguments).

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (hereinafter Yoshida – US Doc. No. 2002/0024153 A1) in view of Sato (US Pat. No. 6,452,215 B1) and further in view of Kononenko (Asymmetric Multiple-Quantum-Well Heterostructures) and even further in view of Momoo et al. (hereinafter Momoo – US Pat. No. 6,741,538 B2).

Claim 16 is rejected for the same reasons as discussed in the prior Office Action, mailed on 12/28/2006 (see Response to Arguments).

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (hereinafter Yoshida – US Doc. No. 2002/0024153 A1) in view of Sato (US Pat. No. 6,452,215 B1) and further in view of Kononenko (Asymmetric Multiple-Quantum-Well Heterostructures) and even further in view of Brown (US Pat. No. 5,625,729).

Claim 17 is rejected for the same reasons as discussed in the prior Office Action, mailed on 12/28/2006 (see Response to Arguments).

Allowable Subject Matter

7. Claims 9, 10, 12, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 9, 10, 12, and 13, see reasons for indicating allowable subject matter in the Office Action that was mailed on 4/4/2005.

Claim 19 is allowable over prior art of record as it does not disclose or suggest all of the limitations of claim 1 as well as the further limitation that the half-width value of the main peak is in a range from 6 nm to 10nm.

Response to Arguments

8. Applicant's arguments filed 6/26/2007 have been fully considered but they are not persuasive.

Applicants argue, on page 10 of the Remarks, received on 6/26/2007, that Yoshida does not suggest an indirect semiconductor. Examiner respectfully disagrees. Examiner would like to point out that Yoshida specifically identifies an element of his light emitting device as "an indirect transition semiconductor" (see page 4, paragraphs 0040-0042; see specifically page 4, paragraph 0041 – note line 2 of that paragraph). Examiner asserts that many lasers found in the optical recording and reproducing area are in fact diodes that emit light, or a light emitting diode – more specifically a laser emitting diode.

Applicants argue, also on page 10 of the Remarks, that Sato fails to disclose an indirect semiconducting laser. Applicants reason that the laser disclosed by Sato is not an indirect semiconducting laser since the ratio of the elements in the active and barrier layers are not consistent with Applicants expectations of said layers. Examiner respectfully disagrees with the statement that Sato does not disclose an indirect semiconducting laser. Sato, in fact, discloses an indirect semiconductor formula which

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serves as an embodiment of his invention (see column 4, lines 20-24). Examiner notes that this formula also satisfies Applicants arbitrary and unclaimed definition of an indirect semiconductor based on element ratios therein.

Applicants argue, on page 11 of the Remarks, that Kononenko does not show quantum well structures as claimed in the present invention. Examiner would like to point out that Kononenko does disclose asymmetric quantum wells and provides reasons (motivation) for their use in lasers (see page 1). Examiner asserts that Kononenko does disclose the quantum well structures as claimed in the instant application. Examiner would also like to remind Applicant that the claims are given the broadest reasonable interpretation consistent with the specification. See *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir. 1997).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

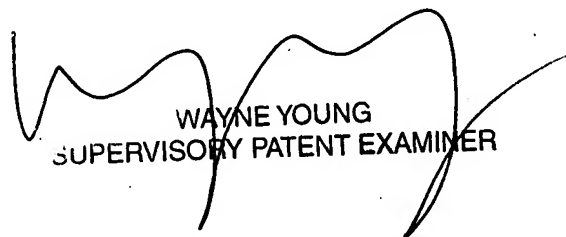
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARG 9/11/2007



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER